

Chapter 2: The Planning Area

The planning area includes Monroe County and the incorporated municipalities of the Village of Islamorada, City of Layton, City of Key Colony Beach, the City of Marathon, and the City of Key West. The Monroe County *Year 2010 Comprehensive Plan* contains extensive narrative to describe the County and its policies. The following brief summaries are, in large part, taken from that document.

2.1 Geography & Planning Area

Monroe County is located at the southernmost tip of the State of Florida. The Florida Keys are situated in a precarious physical location between the Gulf of Mexico and the Atlantic Ocean dangling from the mainland like “hurricane bait.” The Keys consist of an archipelago that sweeps for almost 150 miles in a southwesterly direction from southeastern Miami-Dade County. The mainland portion of the County is bordered by Collier County to the north and Miami-Dade County to the east (See Figure 2-1).



Figure 2-1. Location Map

The total area of Monroe County is approximately 1.2 million acres (about 1,875 square miles). Large portions are submerged lands associated with parks and preserves that are under the jurisdiction of the federal and state governments. The total land area is approximately 885 square miles, of which about 102 square miles are in the Keys (including unincorporated and incorporated municipalities). The entire mainland portion is within the Everglades National Park or the Big Cypress National Preserve and is virtually uninhabited.

The County's *Year 2010 Comprehensive Plan* focuses primarily on the Florida Keys – which is the same planning area for the Local Mitigation Strategy. The Florida Keys are typically long, narrow, and low-lying islands. The average elevations of the various larger islands range from four to seven feet above mean sea level. Only one small area in the City of Key West referred to as Solares Hill rises to 16 feet above mean sea level. Other relative high areas are several coral ridges in Key Largo are near Mile-Marker 106.

2.2 Population

The estimated projected population of Monroe County and the incorporated municipalities for 2005, including incorporated municipalities, is just over 88,000 (see Table 2-1). The permanent resident population is growing at about 0.6% per year. The area's population varies considerably due to seasonal residents; at peak season, the seasonal population is estimated at 73,737. All told, the Florida Keys receives approximately 3,000,000 visitors per year.

Table 2-1. Population Estimates

	Permanent Resident*	Seasonal	Functional (combined permanent & seasonal)
Monroe County (unincorp)	40,816	35,518	76,334
Islamadora	7,897	8,735	16,632
Layton	221	169	390
Key Colony Beach	1,160	1,723	2,883
Key West	26,731	17,354	44,085
Marathon	11,480	10,238	21,718
Total	88,305	73,737	162,042

*The projected permanent population is based on a methodology created by The Division of Planning and Environmental Resources, and is based on 1990 Census data

Approximately 15% of the total population is over the age of 65. As of mid-2005, the Special Needs Registry includes approximately 363 people enrolled in the Special Needs Hurricane Evacuation Program due to age, medical condition, or other factors require

assistance from the County to evacuate during an emergency (Table 2-2). The County has a small non-English speaking population spread throughout the Keys and a small transient worker population.

Table 2-2. Special Needs Registry (2005)

Mile Marker	Registered Special Needs
0-12	183
13-40	39
41-72	57
73-92	31
93-113	53
Total	363

2.3 Land Use & Growth Trends

Growth trends in Monroe County are regulated through the number of residential permits issued. The majority of the new residential permits issued are for permanent residential use although some permanent dwellings are used by seasonal residents.

The number of dwelling units (permanent and seasonal) which can be permitted in Monroe County has been controlled by the Rate of Growth Ordinance adopted by Monroe County in 1992 to implement portions of its Comprehensive Plan. Called ROGO, this approach was developed as a response to the inability of the road network to accommodate a large-scale hurricane evacuation in a timely fashion. A series of complex models developed during the area's first evacuation study identified an approximate number of additional dwelling units which could be permitted and which would not have a detrimental effect on the time needed to evacuate the Keys. The number of allocations for each area was based upon the supply of vacant buildable lots. The ROGO system was developed as a tool to equitably distribute the remaining number of permits available both geographically and over time.

The ROGO system distributes a pre-determined number of allocations for new residential permits on a yearly basis from July 14 of one year to July 13th of the following year. Each service area of unincorporated Monroe County and several of the incorporated areas receive allocations. The Ocean Reef area of north Key Largo is exempted from the ROGO system due to its proximity to Card Sound Road, an alternate evacuation route.

In unincorporated Monroe County, the ROGO system allowed 255 allocations for new residential units for each of the first six years. The number of allocations available was

reduced by 20% (from 255 to 204) by the State of Florida Administration Commission during Year 7, based upon a lack of progress on the implementation of the Year 2010 Comprehensive Plan.

The County's annual allocation was further reduced to 158 by the incorporation of Islamorada and Marathon, which receive 22 and 24 allocations per year, respectively. This number was further reduced by the incorporation of Marathon, which received a total of 24 new residential allocations.

The current allocation of 158 is divided into 127 "market rate" and 31 "affordable" units and are distributed in unincorporated Monroe County as follows:

- 46 units in the Upper Keys service area,
- 7 units in the Middle Keys service area, and
- 74 units in the Lower Keys.

Nonresidential permitting also plays a role in land use and growth trends. Nonresidential permits include everything that is not residential, including industrial, commercial, non-profit and public buildings, and replacement or remodeling of existing nonresidential structures. Also included are vested and ROGO-exempt hotels, motels, campgrounds, marinas and other commercial facilities.

With very little industrial and agricultural activity in the Keys, the predominant form of nonresidential development is commercial. There are two primary types of commercial development: retail trade and services (which includes tourism-related development such as marinas and restaurants). Therefore, the impact of nonresidential development on public facilities varies significantly based on the type of commercial use.

Nonresidential and residential developments tend to fuel one another. Residential populations provide markets for nonresidential activities. Nonresidential development, in turn, helps to drive permanent and seasonal population growth by providing services and employment. Certain types of nonresidential development also concentrate the demand for public facilities within certain locations and during peak seasons.

Since residential development is constrained through the Rate of Growth Ordinance and the Permit Allocation System, it was thought that nonresidential (commercial) development should also be constrained in the interest of maintaining a balance of land uses.

At the time the Comprehensive Plan was prepared in 1991, 17.6% of the land was under residential use, while 4.6% was used for commercial development). It was determined that this balance was appropriate at the time. To assure that balance was maintained, the Comprehensive Plan proposed Policy 101.3.1. In effect, the square footage of new commercial development that may be permitted is limited to 239 square feet for each new residential permit issued. This equates to around 37,762 square feet of new commercial development per year throughout unincorporated Monroe County.

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Property Valuations*

Residential: \$9.324 million
Commercial/Medical: \$1.932 million
Medical: \$154 million
Industrial: \$203 million
Agricultural: \$23 million
Education: \$30 million
General Government: \$68 million
Emergency Response: \$15 million

Table 3.3.1*
Florida State Hazard Mitigation Plan (2004)

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2.4 Economic Characteristics

Monroe County's economy is unique in a number of respects due to its location and geography. The area attracts both seasonal residents and short-term visitors, drawn by the amenable climate and recreational opportunities. The economy is dominated by tourism and the commercial fishing industry. The following text is based on the Comprehensive Plan (1999).

There are approximately 175 hotels and motels with a total of over 7,200 rooms, numerous rental homes, 109 Mobile Home/RV parks, 6,100 individual mobile home parcels, and over 2,800 campsites. Services, dominated by hospitality (food and lodging), is the largest segment of the private sector, followed by retail trade. These industries account for nearly 52% of total employment, and 67% of private sector employment.

Commercial fishing represents 7% of total employment and 9% of private sector employment. A combination of economic and natural resources factors have lead to a decline in the number of commercial fishing vessels and a long-term downward trend in the total poundage of the harvest.

Two other private sector categories together account for about 15% of total employment: construction and finance/insurance/real estate.

Public sector employment accounts for just over 20% of total employment. This category includes the federal government (and military), State and local government agencies, and utilities.

Because the tax base in Monroe County is supplemented by tourism, declines in the number of visitors after major hurricanes lead to reduced revenue associated with the Bed Tax, Sales Tax, and Infrastructure Tax. Historically, damaging storms result in significant loss of revenues.

2.5 Transportation

The transportation network in the Florida Keys is unique in that a single road forms its backbone and the sole link to the Florida mainland. U.S. Route 1, referred to as the Overseas Highway, runs for 126 miles from Florida City in Dade County to Key West in Monroe County. Maintained by the Florida Department of Transportation, for most of its length U.S. 1 is a two-lane highway with 41 bridges (combined total length of 19 miles of bridge).

U.S. 1 is a lifeline for the Keys, functioning as both highway and “Main Street.” Each day it brings food, materials, and tourists from the mainland, driving the local economy.

Approximately 450 miles of roads, including 37 bridges, are maintained by the County. Card Sound Road, operated as a toll road, is an alternate to U.S. 1 in some locations. Mainland Monroe County consists primarily of government-owned parks and preserves, and consequently has few roads. The only County-maintained road is Loop Road, a 16-mile excursion off of U.S. 41 crossing the Dade and Collier County lines.

The cities of Key West, Marathon, Key Colony Beach, Layton, and Islamorada are responsible for the streets within their boundaries.

Air transportation is a viable alternative to highway travel. Monroe County’s by two airports: Key West Airport and Marathon Airport, serve major commercial airlines. Four privately-owned community airports are also located in the Keys.

2.6 Critical Facilities

The LMS Work Group determined that the following distinctions are appropriate for “critical facilities,” where that term includes buildings and facilities that are identified by the public entities, utilities, and non-profit organizations that own them:

- **Critical Facilities** are buildings and infrastructure that are vital to the operations and continuity of government operations necessary to perform essential security missions and services to ensure the general public health and safety in order to make daily living and working possible. Critical facilities generally should be functional within 24 to 72 hours after a declared disaster depending on the severity of the event.
- **Primary/Important Facilities** are those that should be functional within seven days after a declared disaster.
- **Secondary/Standard Facilities** are those that need not be fully functional until six months after a declared disaster.

Appendix A contains a database of public and critical facilities and certain private non-profit facilities and basic information. Figures 2-2a through 2-2f (end of chapter) show locations of those facilities that can be plotted (as of mid-2005). Table 2-3 contains notes on selected critical facilities and Table 2-4 contains notes on selected infrastructure.

Table 2-3. Notes on Selected Critical Facilities

Hospitals/Nursing Homes	<p>Hospitals</p> <ul style="list-style-type: none"> • Florida Keys Health Systems (Depoo Hospital and Lower Florida Keys Health Center) • Marathon (Middle Keys) – Fishermen’s Hospital • Tavernier (Upper Keys) – Mariner’s Hospital • All hospitals must evacuate Monroe County in a storm of Category 3 or greater. <p>Nursing Homes</p> <ul style="list-style-type: none"> • Bayshore Manor, Key West (Monroe County owned and operated) • Key West Convalescent Center (proprietary) • Marathon Manor Nursing Home (proprietary) • Plantation Key Convalescent Center (proprietary) • All nursing homes must evacuate Monroe County in a storm of Category 3 or greater.
Schools/Shelters	<p>Public Schools/Hurricane Shelters</p> <p>Only selected schools have been identified as suitable shelters for use in tropical storms, Category 1-2 hurricanes, and other emergency purposes. In most cases, for hurricanes of Category 3 and higher all persons must evacuate Monroe County and shelters will not be used:</p> <ul style="list-style-type: none"> • Key West High School, 2100 Flagler Ave., KW • Sugarloaf Elementary School, Mile-Marker 19, Sugarloaf Key • Stanley Switlik Elementary School, Mile-Marker 48.5, Marathon • Coral Shores High School, Mile-Marker 90 Plantation Key • Key Largo School Cafetorium, Mile-Marker 105, Key Largo <p>Other facilities that may be used as hurricane shelters:</p> <ul style="list-style-type: none"> • Horace O’Bryant School, Key West • Harvey Government Center, Key West • Saint Justin Martyr Catholic Church, Key Largo
Other	<p>Other facilities critical/important for recovery:</p> <ul style="list-style-type: none"> • Habitat for Humanity of Key West and Lower Florida Keys, 30320 Overseas Highway (storage for water, temporary roof coverings and supplies, client intake for emergency home repair needs and staging area for volunteer coordination)

Table 2-4. Notes on Selected Infrastructure

<p>Bridges</p> <ul style="list-style-type: none"> • 42 bridges connect primary roadway US 1. • Two drawbridges, Jewfish Creek located at Mile-Marker 107 and Snake Creek Bridge at Mile-Marker 86, open periodically for marine traffic; drawbridge operations and possible breakdowns can interrupt traffic flow. • “Lifelines” (Linear components of critical infrastructure)

Table 2-4. Notes on Selected Infrastructure

Water Lines <ul style="list-style-type: none">• Primary supply pipeline on mainland in Florida City (managed by Florida Keys Aqueduct Authority)• Some distribution pipeline connected to roads and bridges.• Contingency and redundancy:• Primary pipeline serving Upper Keys is subaqueous and does not depend on roads and bridges.• Reverse Osmosis Plant located in Marathon to serve Middle Keys.• Reverse Osmosis Plant located in Stock Island (Key West) to serve Lower Keys.
Power Lines <ul style="list-style-type: none">• Electric Power supplied by Florida Keys Electric Cooperative (FKEC) Upper Keys to Marathon• Electric Power supplied by Key West City Electric System (CES) Marathon to Key West.• Majority of electric lines above ground.• No power poles located on bridges.• To prevent loss if bridges are damaged, transmission line power poles are pile-driven into the water along roads and bridges.• Subsequent to Hurricane Andrew poles re-designed to withstand serious storm conditions were installed in certain areas such as along the 18-mile stretch. Old equipment is being replaced with newer, more resilient materials.
Telephone Service <ul style="list-style-type: none">• To provide redundancy, two major trunk fibers are provided from Homestead on the mainland to Key West. One is buried and the other is aerial.• Most cable lines located along underside of fixed bridges, therefore vulnerable if bridges fail.• Digging not feasible because of rock substructure.• Environmental considerations inhibit underwater installations.

2.7 Environmental & Historic Resources

2.7.1 Environmental Resources

The Florida Keys contains many valuable environmental resources. It has unique habitats, with many rare and/or endangered plant and animal species. Because of these special environmental considerations, in 1980, through legislative act, the State of Florida designated the Keys portion of unincorporated Monroe County and the incorporated municipalities as “Areas of Critical State Concern.” The purpose of the program is to protect the unique environment, vegetation, and natural resources of the designated area by regulating land development and other activities regarded as detrimental to the environment. In conjunction with the designation, the legislature enacted the “Principles for Guiding Development,” which are set forth in Chapter 380.0552(7). The law provides for State oversight of development and changes to land use regulations, a function carried out by the Department of Community Affairs. The Department established Field Offices in Monroe County to assist in review of development permits and related issues for compliance with the “Principles.”

The Florida Department of Environmental Protection Office in Marathon submitted the following list of specific environmentally sensitive areas referred to as “Special Management Areas” (state and federal):

- Florida Keys Marine Sanctuary (comprehensive designation)
- Bahia Honda State Park
- Fort Zachary Taylor State Historic Site
- Indian Key State Historic Site
- John Pennekamp Coral Reef State Park
- Lignum Vitae Key State Botanical Site
- Long Key State Park
- Windley Key Fossil Reef State Geological Site
- Curry Hammocks State Park
- San Pedro Underwater Archaeological Preserve
- Key Deer National Wildlife Refuge
- Great White Heron National Wildlife Refuge
- Looe Key National Marine Sanctuary
- Key Largo National Marine Sanctuary
- Everglades National Park (primarily mainland Monroe)

2.7.2 Historic Resources

A significant percentage of tourism in the Keys is associated with its unique archeological, historical, and cultural heritage and many landmarks. Many sites are listed on the National Register of Historic Places and designated for protection (available at <http://www.cr.nps.gov/places.htm>). Many identified historic resources could experience irreversible damage from hurricanes. The Historic Florida Keys Foundation, Inc. has agreement with County to provide professional staffing for historic preservation. The County has about 330 locally- designated sites identified under Article 8 of the Monroe County Code as Archaeological, Historical, and/or Cultural Landmarks (available on the County’s webpage). Key West’s Historic Architect Review Commission has locally- designated about 2,300 sites (available on the City’s webpage).

Despite recent hurricanes, historic resources have, for the most part, escaped significant damage. A number of significant properties have been mitigated:

- The Old Monroe County Courthouse, a state-owned building, has suffered wind damage in the past; it was retrofit with window protection using FEMA's Hazard Mitigation Grant Program funds.
- Retrofit the steeple of the Old Key West City Hall with motorized hurricane shutters was funded by FEMA.

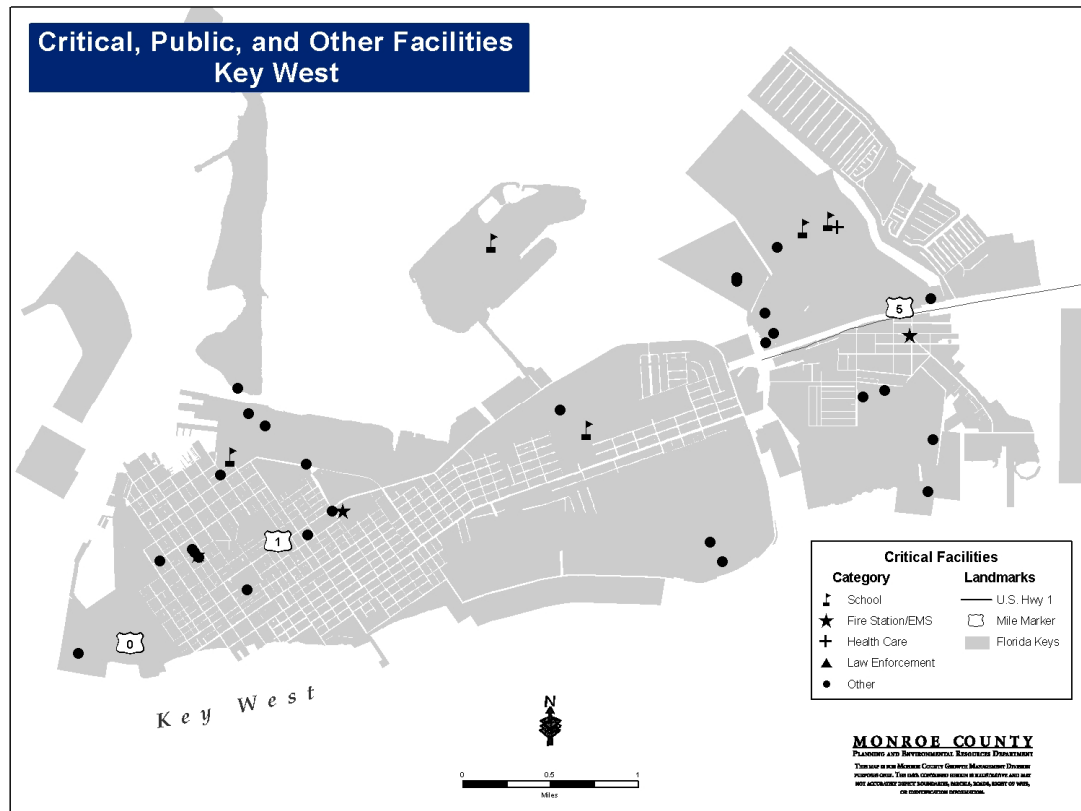


Figure 2-2a. Critical, Public, and Other Facilities, Key West

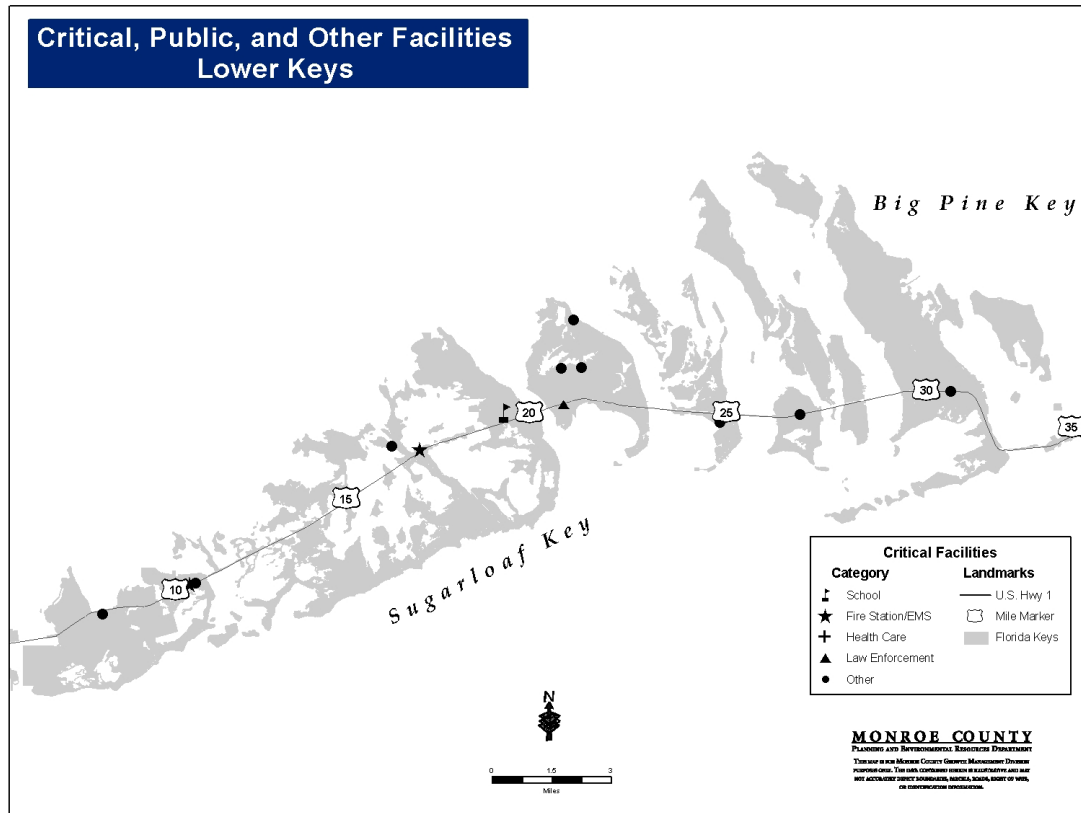


Figure 2-2b. Critical, Public, and Other Facilities, Lower Keys

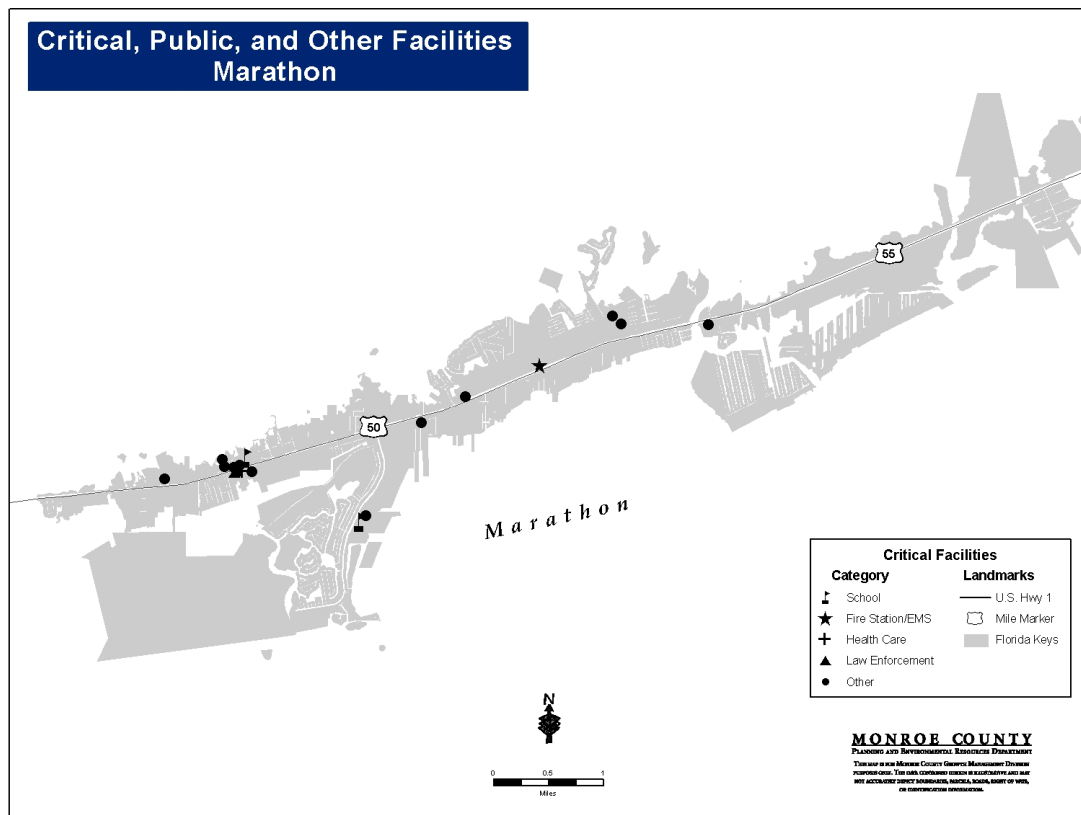


Figure 2-2c. Critical, Public, and Other Facilities, Marathon

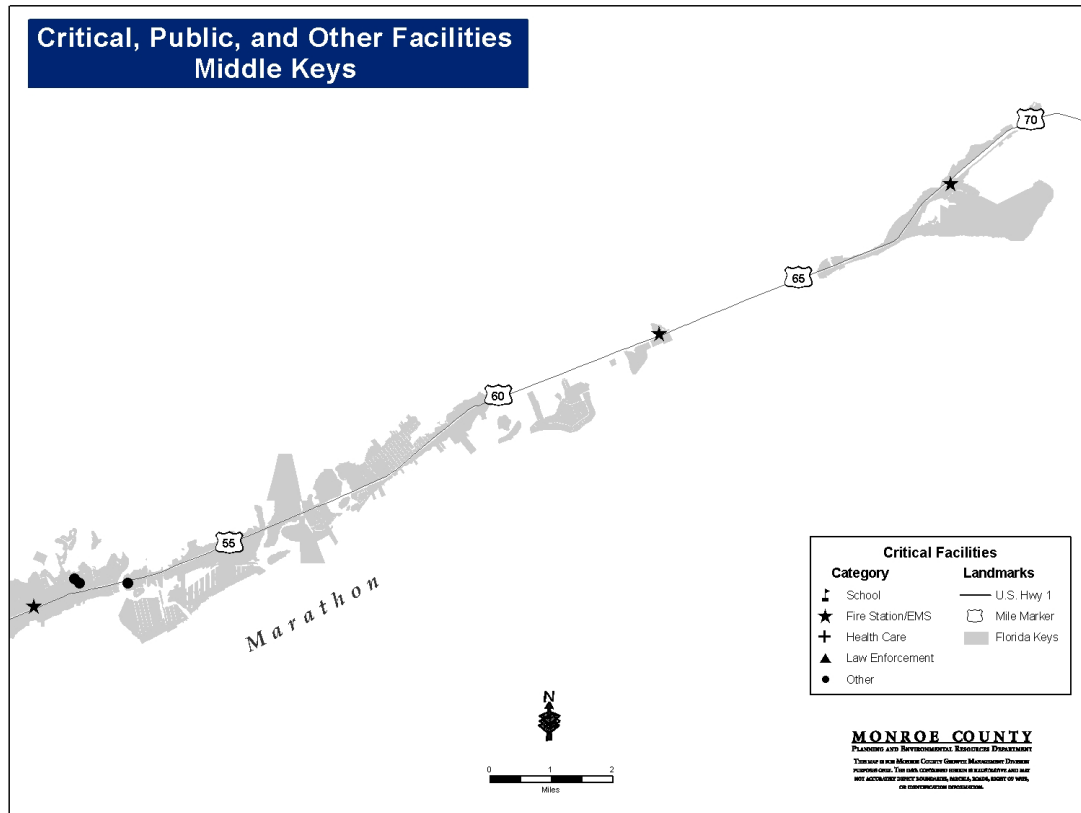


Figure 2-2d. Critical, Public, and Other Facilities, Middle Keys

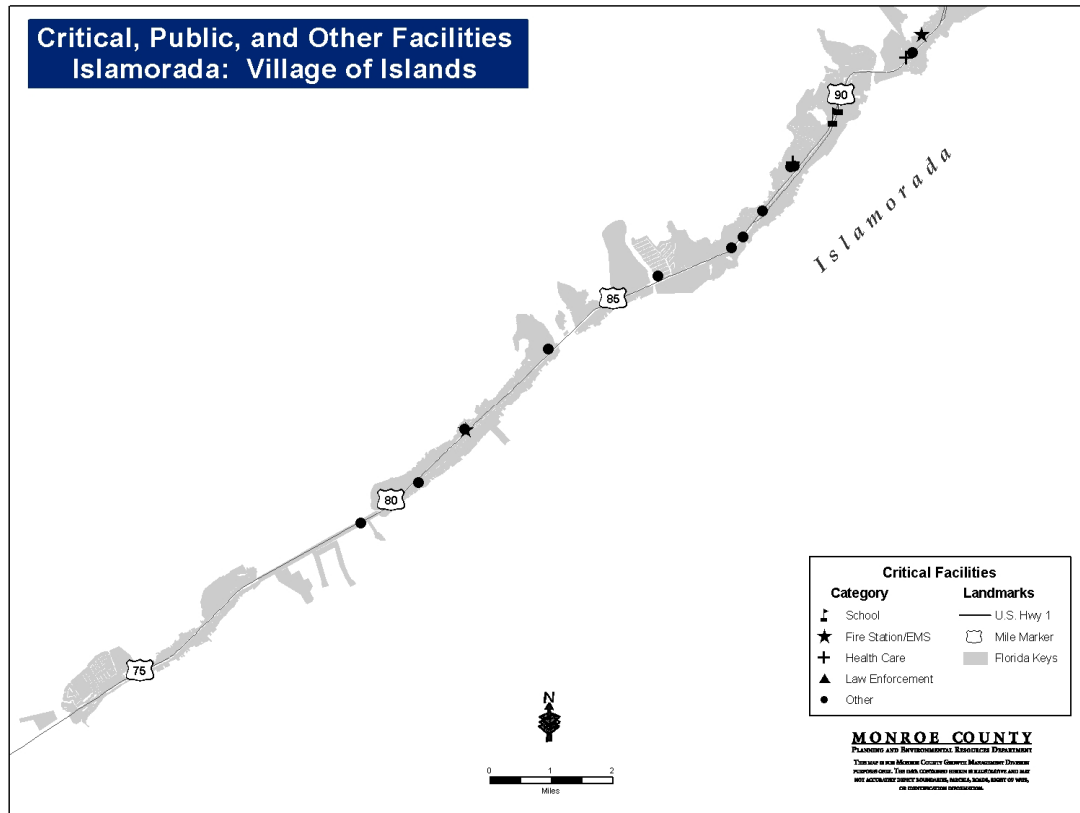


Figure 2-2e. Critical, Public, and Other Facilities, Islamorada: Village of Islands

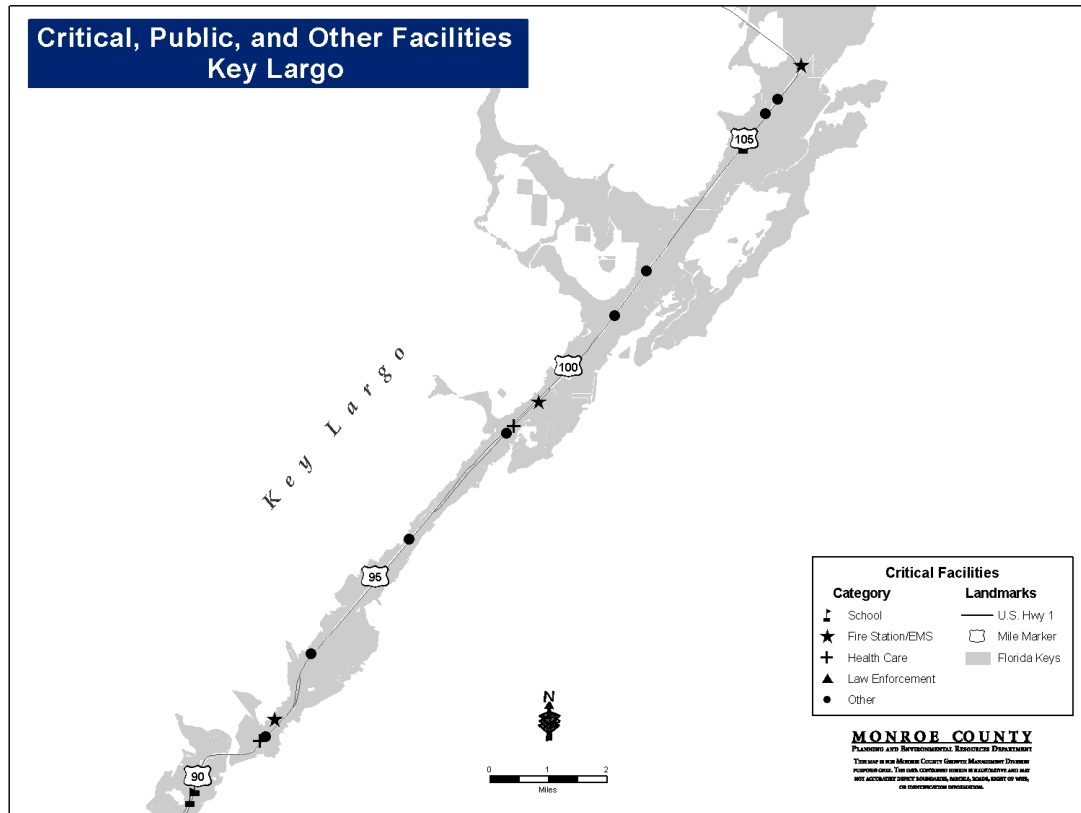


Figure 2-2f. Critical, Public, and Other Facilities, Key Largo